REMARKS

In the Office Action dated July 14, 2005, the Examiner rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 101; rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 112, ¶ 1; rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 112, ¶ 2, rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under the judicially created doctrine of obviousness-type double patenting over claims 1-33 of U.S. Patent Application No. 08/636,706 ("the '706 application"), over claims 1-28 of U.S. Patent No. 5,999,988 ("the '988 patent"), and over claims 1-20 of U.S. Patent No. 6,654,793 ("the '793 patent); rejected claims 34, 39-41, 53, 54, 59-61, 64, 66, 68, 70, 71, 73, 75, 77, 78, 80, 82, 84, 85, 87, 89, 81, 92, 94, 96, 98, 99, 101, and 103-15 under 35 U.S.C. § 103(a) as being unpatentable over *Gaines* (U.S. Patent No. 5,961,582) in view of *Madduri* (U.S. Patent No. 5,764,982); and rejected claims 35-38, 55-58, 65, 67, 72, 74, 79, 81, 86, 88, 93, 95, 100, and 102 under 35 U.S.C. § 103(a) as being unpatentable over *Gaines* in view of *Madduri* in further view of *Priven et al.* (U.S. Patent No. 5,327,559).

By this amendment, Applicants have amended claims 34, 35, 36, 38, 40, 41, 54, 55, 56, 57, 58, 60, 61, 71, and 85. Claims 42, 43, 62, 63, 76, 83, 90, 97, and 106-114 were previously cancelled without disclaimer or prejudice and claims 44-52 were withdrawn. In view of these amendments and the following remarks, Applicants respectfully traverse the rejections set forth in the Office Action.

I. Claim Rejections Under 35 U.S.C. § 101

The Examiner rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter because the claims appear to be comprised of software alone without associated computer hardware. (OA at 2-3.) Although Applicants respectfully disagree with the Examiner's position, Applicants have amended independent claims 34 and 54 to read, "running the first program on the first abstract computing machine that is executed by the data processing system," and "running the second program on the second abstract computing machine that is executed by the data processing system." Accordingly, claims 34 and 54 each recites computer hardware that is integral with the method steps recited in these claims. As such, Applicants request the rejection of claims 34 and 54, and their respective dependent claims 35-41 and 55-61, under 35 U.S.C. § 101 be withdrawn.

Applicants, however, have not amended independent claims 53, 92, and 99 because these claims recite means-plus-function language that correlate to computer hardware. A proper review of the specification reveals a system including several hardware and software elements that collectively perform the functions recited in these claims. For instance, Fig. 1 shows a client computer 11(N) and a server computer 12(M) interconnected by a communication link 14. These elements further comprises execution environments 20 and 24, respectively, as well as other components, such as classes 23, 27, 31, etc. As described, in certain embodiments, computers 11(N) and 12(M) are described as computers that perform one or more of the features recited in claims 53, 92, and 99. (*See e.g.*, 4:19 to 6:22, 8:11-26,9:3-21, 10:11 to 11:25.) Indeed, the specification clearly states that computers 11(N) and 12(M) may perform the operations shown in Fig. 2 (Fig. 2 and 13:10-13.) Accordingly, the Examiner is incorrect in asserting claims 53, 92, and 99 merely recite computer software and not computer hardware because in

one embodiment, client and server computers 11(N) and 12(M) may represent the structure(s) that perform one or more of the functions recited in these claims. As such, Applicants request the rejection of claims 53, 92, and 99, and their respective dependent claims 93-96, 98, and 100-105, under 35 U.S.C. § 101 be withdrawn.

Further, independent claims 64, 71, 78, and 85 recite, among other things, a "first computing environment," and a "second computing environment." For instance, claims 64 and 78 each recites "executing a first program . . . on the first computing environment," and "executing the portion of the first code on the second computing environment." Claim 71 recites, "a program executing in the first computing environment," and "executing a portion of the first code on the second computing environment." Claim 85 recites, "receiving, by the second computing environment," "executing the portion of the first code by the second computing environment," and "returning, by the second computing environment." A "computing environment" is sufficient language to show the presence of at least hardware or software executed by some hardware, that performs the recited functions in these claims. The term "computing environment," in the context of Applicants' specification, relates to computer-related components that perform embodiments of the present invention, including those recited in claims 64, 71, 78, and 85. Indeed, as noted above, Applicants' specification is complete with detailed descriptions of such contextual use of the term. Accordingly, Applicants respectfully traverse the Examiner's position that these claims do not recite hardware required for execution because to execute code by or in a computing environment clearly requires some hardware-based element, and not software alone. As such, Applicants request the rejection of claims 64, 71, 78, and 85, and their respective dependent claims 65-68, 70, 72-75, 79-82, 84, 86-89, and 91, under 35 U.S.C. § 101 be withdrawn.

II. Claim Rejections Under 35 U.S.C. § 112, ¶ 1

The Examiner also rejects 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 112, ¶ 1 for the same reasons set forth in the rejection of these claims under 35 U.S.C. § 101. (OA at 3, ¶ 6.) Accordingly, Applicants traverse the Examiner's position for the same reasons set forth above because as noted, claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 are supported by an asserted utility, which is clear from Applicants' specification and the claims themselves. Therefore, Applicants request the rejection of these claims under 35 U.S.C. § 112, ¶ 1 be withdrawn.

III. Claim Rejections Under 35 U.S.C. § 112, ¶ 2

The Examiner also rejects 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 112, ¶ 2 "omitting essential elements," citing to M.P.E.P. § 2172.01. In particular, the Examiner asserts the omitted elements are computer hardware. (OA at 4, ¶ 7.) Applicants respectfully traverse the Examiner's position for the same reasons set forth above in connection with the rejection under 35 U.S.C. 101. Each of these claims recite some level of hardware elements. Therefore, Applicants request the rejection of these claims under 35 U.S.C. § 112, ¶ 2 be withdrawn.

IV. Double Patenting Rejections

The Examiner rejects claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under the judicially created doctrine of obviousness-type double patenting over claims 1-33 of the '706 application.[1] (OA at 4, ¶ 9(1).) The Examiner also rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under the judicially created doctrine of obviousness-type double patenting over claims 1-28 of the '988 patent. (OA at 5, ¶ 9(2)). Further, the

[1] The '706 patent issued on August 30, 2005 as U.S. Patent No. 6,938,263.

Examiner rejected claims 34-41, 44-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under the judicially created doctrine of obviousness-type double patenting over claims 1-20 of the '793 patent. (OA at 5, ¶ 9(3).) Although Applicants respectfully disagree with the Examiner's position, Applicants submit herewith a Terminal Disclaimer disclaiming the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. §§ 154 to 156 and 173, as presently shortened by any terminal disclaimer, of U.S. Patent No. 6,938,263, the '988 patent, and the '793 patent. Accordingly, Applicants request the double patenting rejection be withdrawn.

V. Claim Rejections Under 35 U.S.C. § 103(a)

Three basic criteria must be met to establish a prima facie case of obviousness. First, the prior art reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. *See* M.P.E.P. § 2143.03. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. *See* M.P.E.P. § 2143. Third, a reasonable expectation of success must exist. *See* M.P.E.P. § 2143.02. Moreover, each of these requirements must "be found in the prior art, and not based on applicant's disclosure." M.P.E.P. § 2143.

Applicants respectfully submit the Examiner has not established a *prima facie* case of obviousness with regard to the rejection of claims 34-41, 53-61, 64-68, 70-75, 77-82, 84-89, 91-96, and 98-105 under 35 U.S.C. § 103(a) for the following reasons.

A. The Rejection of Claims 34, 39-41, 53, 54, 59-61, 64, 66, 68, 70, 71, 73, 75, 77, 78, 80, 82, 84, 85, 87, 89, 91, 92, 94, 96, 98, 99, 101, and 103-105.

Regarding claims 34 and 54, the Examiner asserts that *Gaines* discloses, *inter alia,* "sending (transfer) a portion of the code (transferable program 302 including elements of user interface 203) from the first program to the second program (from first to second server hosts); and running the portion of the code by the second program on the second abstract computing machine (execute program 302 at second server host)." (OA at 5-6, ¶ 10.) Further, the Examiner states that *Gaines* teaches "the second/first program has a function (program 302 in each server host computer 101), invoking the function by the first/second program (for execution on a server host computer 101). (OA at 6.) Further, the Examiner admits that *Gaines* does not teach "stub code obtained from the second abstract computing machine." (*Id.*) The Examiner relies on *Madduri* to make up for the deficiencies of *Gaines*. (*Id.*)

Applicants respectfully disagree with the Examiner's position. *Gaines* teaches a system for providing access to remote resources in a distributed computing environment. The system includes one or more computers that include a virtual operating system that is capable of executing programs in a host-independent manner. The system allows a program to be executed on a local and remote host computer using the virtual operating system operating within each computer. In one embodiment, *Gaines* discloses a system where a transferable program 302 comprises elements of a GUI 203 that is provided from a remote computer to a server computer (see *Gaines*, col. 14, lines 15-27).

Madduri discloses a system that uses stubs to facilitate communications in distributed network. According to *Madduri,* system 100 generates client and server stubs 107 and 108. (Fig. 3A and 5:49 to 6:5.) The client stubs may be replicated on system 110. (Fig. 3B and 6:14-18.) To perform a Remote Procedure Call (RPC), the system sends an RPC 131 to client stub

118, which in turn creates a network message 133 and calls runtime library 114. Runtime library then sends a message 135 to library 115 on system 110. In response, system 110 sends a message 137 to server stub 107', which passes arguments to application 103' for implementation. (Fig. 3B and 6:46-67.) Accordingly, *Madduri* merely describes RPC functions that use a stub to make calls to a remote system. The reference does not, as the Examiner asserts, support a rejection where the claim calls for sending a portion of code based on a stub code obtained from a second computing machine. Nor does the combination of *Madduri* and *Gaines* support the rejection of claims calling for the sending step and running the portion of the code on the second computing machine, as recited in claims 34 and 54. *Madduri* shows a system 100 that duplicates stub files on another system 110. (Figs. 3A and 3B.) Further, system 110 executes the RPC. (6:65-67.) This configuration is similar to *Gaines*, and thus suffers the same deficiencies, in that *Gaines* shows a first system that sends code to a second system for execution (i.e., program 302). For instance, in order to teach the recitations of claims 34 and 54, the system in either of the two cited reference that executes the transferred code must correlate with the "second abstract computing machine" recited in claims 34 and 54 because the claimed "second abstract computing machine" runs the portion of the code. Further, in order to support the reasons set forth by the Examiner for combining *Madduri* with *Gaines,* system 100 of *Madduri* must correspond to the claimed "first abstract computing machine" because system 100 sends the RPC with the code that is implemented by system 110. (Fig. 3B and 6:55-67.) For similar reasons, the system disclosed by *Gaines* that sends program 302 to a second system must also correspond to the claimed "first" computing machine to support the Examiner's assertions. With these observations in mind, we review how *Madduri* operates. As disclosed above, *Madduri* sends an RPC to system 110 for execution. Further, system 100 duplicates stub files on system

110. Thus, system 100 of *Madduri* is a system that provides the stub and does not execute the sent code.

In contrast, claims 34 and 53 include recitations that the "second" computing machine provides the stub to the "first" computing machine and runs the portion of the code. Neither *Gaines* alone, or with the disclosure of *Madduri*, teaches or suggests these features. Instead, the system in *Madduri* that sends code for execution (i.e., system 100) does not receive, or is not provided with, a stub code from a second system that runs the sent code (i.e., system 110). Instead, it is the first system (i.e., system 100) that duplicates the stub code to the second system 110. In this regard, *Madduri* does not support the Examiner's assertions that the combination of *Madduri* and *Gaines*, teaches or suggests the recitations of claims 34 and 54. Instead, combining *Madduri* with *Gaines* would merely result in the first system of *Gaines* also providing stub files to the second system that executes the sent code, which is not the same as the recitations of claims 34 and 54.

Accordingly, the cited art fails to teach or suggest, in any combination, a first computing machine that sends a portion of code to a second computing machine, that runs the portion of code, and where the portion of code is based on stub code obtained from the second computing machine. Accordingly, the use of *Madduri* to teach or suggest the admitted missing recitations of *Gaines* is not established by the asserted combination. That is, even after considering the Examiner's position, the asserted combination still fails to teach or suggest each and every recitation of claims 34 and 54. Accordingly, the Examiner has not established a *prima facie* case of obviousness in rejecting claims 34 and 54, and for at least this reason, Applicants request the rejection be withdrawn and the claims allowed.

Further, there is no motivation to combine *Madduri* with *Gaines*, as asserted by the Examiner. According to the Examiner, because *Madduri* discloses stub code that enables communications between remote systems, one of ordinary skill in the art would have been motivated to make the asserted combination. However, merely using stub files to facilitate communications is not enough to show obviousness of claims 34 and 54.

Determinations of obviousness must be supported by evidence in the record. *See In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001) (finding that the factual determinations central to the issue of patentability, including conclusions of obviousness by the Board, must be supported by "substantial evidence"). Further, the desire to combine references must be proved with "substantial evidence" that is a result of a "thorough and searching" factual inquiry. *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002) (quoting *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52). In this case, the Office Action does not show that a skilled artisan considering *Gaines* and *Madduri*, and not having the benefit of Applicants' disclosure, would have been motivated to combine or modify the references in a manner resulting in Applicants' claimed combination. The Examiner alleges that a skilled artisan would have modified *Gaines* to automate "the generation of the communication interfaces, leading to fewer errors." (OA at 6.) This conclusion is not properly supported and does not show that a skilled artisan would have combined the references as alleged. The mere fact that *Madduri* mentions using stub files to communicate between remote systems does not show that a skilled artisan would have been motivated to modify *Gaines* as alleged (i.e., to teach sending a portion of code that is based on stub code obtained from a second abstract computing system).

The M.P.E.P. makes clear that: "[t]he mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the

desirability of the combination" M.P.E.P. § 2143.01 (citations omitted). The Examiner has not shown that the cited art "suggests the desirability" of the alleged combination. Indeed, there is no reason why a skilled artisan would look to modify a virtual operating system environment as taught by *Gaines* with a RPC-based communication system taught by *Madduri. Gaines* teaches away from the use of a "virtual machines" by stating such systems are inadequate in achieving the desired goal of host-independence. In contrast, *Madduri* requires systems 100 and 110 to share stub files for facilitating communications, which is divergent from the features of *Gaines.* Therefore the conclusions in the Office Action were not reached based on facts gleaned from the cited references and that, instead, teachings of the present application were improperly used in hindsight to reconstruct the prior art. For at least these additional reasons, the Examiner has not established a *prima facie* case of obviousness with respect to claims 34 and 54, and thus, the rejection of these claims under 35 U.S.C. § 103(a) should be withdrawn and the claims allowed.

Claims 39-41 and 59-61 depend from claims 34 and 54, respectfully. As explained, the cited art does not support the rejection of claims 34 and 54. Accordingly, it follows that the cited art also does not support the rejection of claims 39-41 and 59-61 for at least the same reasons set forth above in connection with independent claims 34 and 54, and Applicants request that the rejection of these claims be withdrawn and the claims allowed.

The Examiner rejects claims 53, 64, 71, 78, 85, 92, and 99 for the same reasons set for claim 34. As explained, the Examiner has not established a *prima facie* case of obviousness with regard to claim 34 in view of the cited art. Accordingly, in light of the remarks set forth above in connection with claim 34, Applicants also assert that the cited art does not support the rejection of claims 53, 64, 71, 78, 85, 92, and 99 under 35 U.S.C. § 103(a) and requests that the rejection of these claims be withdrawn and the claims allowed.

Claims 66, 68 and 70 depend from claim 64. Claims 73 and 75 depend from claim 71. claims 80, 82 and 84 depend from claim 78. Claims 87, 89 and 91 depend from claim 85. Claims 94, 96 and 98 depend from claim 92. Claims 101 and 103-105 depend from claim 99. As explained, the cited art does not support the rejection of claims 64, 71, 78, 85, 92, and 99. Accordingly, it follows that the cited art also does not support the rejection of claims 66, 68, 70, 73, 75, 80, 82, 84, 87, 89, 91, 94, 96, 98, 101, and 103-105 for at least the same reasons set forth in connection with independent claims 64, 71, 78, 85, 92, and 99. Therefore, Applicants request that the rejection of these claims be withdrawn and the claims allowed.

B. The Rejection of Claims 35-38, 55-58, 65, 67, 72, 74, 79, 81, 86, 88, 93, 95, 100, and 102.

Claims 35-38 and 55-58 depend upon claims 34 and 54, respectfully. As explained above, *Gaines,* alone or in combination with *Madduri*, does not support the rejection of claims 34 and 54. Accordingly, the cited art also does not support the rejection of claims 35-38 and 55-58 and Applicants request that the rejection of these claims be withdrawn and the claims allowed. Additionally, in an attempt to supplement the teachings of *Gaines* and *Madduri*, the Examiner asserts *Priven et al.* teaches "sending an object (CIP object 702) obtaining a portion of code (action 706) of one program to another program for remote execution in a distributed execution environment." (OA at 8.) The Examiner supplements this position by stating the "CIP object is passed to an executed on another system," thus inferring *Priven et al.* teaches the missing recitation not taught by *Gaines* and *Madduri*. (OA at 8.) Applicants disagree with the Examiner's assertions. The action attribute 706 is not a portion of code. Instead it is attribute information. *Priven et al.* does not teach or suggest sending an object containing a portion of code, much less using that portion to invoke a function or process in the remote system.

Accordingly, the cited art does not support the rejection of claims 35 and 55 and Applicants respectfully request that the rejection be withdrawn and the claims allowed.

Further, in rejecting claims 36 and 56, the Examiner asserts that "*Gaines* as modified teaches (Priven) sending data (parameters 708) for remote execution." (OA at 8.) Although *Priven et al.* discloses parameters that are sent with the CIP object to a remote system, the reference falls short of disclosing that the CIP object, or any portion of code, is sent as a parameter. Moreover, the combination of *Priven et al., Gaines,* and *Madduri* do not teach or suggest that a function or process is invoked using the portion of code. In fact, *Priven et al.* states that the CIP object itself is executed by the remote system (i.e., ACM 1112). *See Priven et al., col. 10, lines 51.* Because the cited references fail to support the rejection of claims 36 and 56, Applicants respectfully request that the rejection of these claims be withdrawn and the claim allowed.

Additionally, the Examiner asserts that "Priven teaches sending an object (CIP object 702) containing a portion of code (action 706) of one program to another program for remote execution in a distributed execution environment." Further, the Examiner states that "Priven teaches that, between two distributed programs, code (action 114) is part of an object (CIP object 702), passing the object as a parameter to a function (remote processing by application 1116). (OA at 8.) Applicants respectfully disagree with the Examiner interpretations.

Priven et al. teaches a system for providing a communication interface packet (CIP) in the form of an object. The CIP object is sent from one system to another remote systems as a flat file for subsequent use. Contrary to the Examiner's assertions, the CIP object is not passed as a parameter to a function. Instead, the CIP object is encapsulated with its own methods for data and attributes included in the CIP object. The attributes may include an action, object, and

parameters. (*See Priven et al., Abstract, col. 3, lines 31-52, and col. 9, line 65 to col. 10, line 42.*) When the CIP object is transmitted to a remote system 1104, an ACM 1112 in the remote system executes the CIP object causing application 1116 (also included in remote system 1104) to perform an action of the object. Nowhere does *Priven et al.* disclose passing the object as a parameter of a function. Accordingly, this reference does not make up for the deficiencies of *Gaines* and *Madduri.*

In light of the above remarks, the rejection of claims 37 and 57 is not supported by the cited art. Accordingly, Applicants request that the rejection of these claims be withdrawn and the claims allowed.

Also, the Examiner asserts that *Priven et al.* discloses "passing the object as a parameter to a function (remote processing by application 1116) and returning the object as a result of (send response to sending system)." (OA at 8.) Contrary to the Examiner's assertions, *Priven et al.* does not disclose returning results to a sending system. Therefore, the cited art does not support the rejection of claims 38 and 58 and Applicants respectfully request that it be withdrawn and the claims allowed.

The Examiner rejects claims 65, 72, 79, 86, 93, and 100, and claims 67, 74, 81, 88, 95, and 102 for the same reasons set for claims 35 and 38, respectively. As explained, the cited art does not support the rejections of claims 35 and 38. Accordingly, in light of the remarks set forth above in connection with these claims, Applicants also assert that the cited art does not support the rejection of claims 65, 67, 72, 74, 79, 81, 86, 88, 93, 100, and 102, and requests that the rejection of these claims be withdrawn and the claims allowed.

VI. Conclusion

In view of the foregoing remarks, Applicants submit that this claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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